

REMARKS

Favorable consideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-57 are currently pending in the present application. In this preliminary amendment, Claims 1, 11, and 13 have been amended and new Claims 30-57 have been added.

In an Official Action issued on February 27, 2003 in parent application 09/899,171, now abandoned, Claims 14-29 were finally restricted; a new title was requested; Claim 11 was objected to; Claims 1-13 were rejected under 35 U.S.C. § 112, first and second paragraphs; Claim 13 was rejected under 35 U.S.C. § 101; Claims 1 and 13 were rejected under 35 U.S.C. § 102(b) as being anticipated by Nishi et al. (U.S. Patent 6,002,467, hereinafter Nishi); Claims 2-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishi; Claims 8, 9, and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishi in view of Muraki et al. (U.S. Patent No. 6,166,387, hereinafter Muraki); Claims 8-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishi in view of Ota et al. (U.S. Patent No. 5,506,684, hereinafter Ota); and Claim 11 was indicated as containing allowable subject matter.

Applicants acknowledge with appreciation the indication of allowable subject matter.

Claims 1, 11, and 13 have been amended to more clearly described and distinctly claim Applicants' invention. Claims 30-57 have been added to recite further features and embodiments of Applicants' invention. No new matter is added.

Applicants traverse the issued restriction requirement in the parent application on January 10, 2003. Applicants submit that the inventions of Groups I - IV have not been shown to be distinct in the manner required by M.P.E.P. §806.05(f) which states that the Patent Office must demonstrate either (1) that the process as claimed is not an obvious

process of making the product and the process as claimed can be used to make other and different products, or (2) that the product as claimed can be made by another and materially different process. In the parent application and in the pending application, Claims 1-13 and 21-27 are directed to an exposure apparatus, Claims 14-20 are directed to surface position adjustment units used in an exposure apparatus, and Claims 28-29 are directed to masks used in an exposure apparatus.

Furthermore, the restriction requirement acknowledges that all Claims are classified in Class 250. Hence it appears that these claims are part of an overlapping search area and that a search for Claims 1-13 would necessarily include all sub-classes required for a search directed to Claims 14-29. Applicants note that MPEP § 803 states “[i]f the search and examination of an entire application can be made without serious burden, the Examiner must examine it on the merits, even though it includes claims to distinct or independent inventions.”

Because the inventions of Groups I - IV have not been shown to be distinct in the manner required by M.P.E.P. §806.05(f), Applicants therefore submit that a search and examination on the entire application would not place a *serious* burden on the Examiner.

In response to the request for a new title, Applicants traverse noting that the title is descriptive of Applicants’ invention when considering the features recited in both Claims 1 and 14.

In response to the rejection under 35 U.S.C. §112, first paragraph, Applicants submit that the originally filed specification<sup>1</sup> of the present application explains how an exposure apparatus 10 in Fig. 1 performs exposure in a state where a mask and a substrate are substantially stationary (i.e., step-and-repeat exposure).

In response to the rejection of Claim 1 under 35 U.S.C. §112, second paragraph, Applicants traverse and submit that the rejection was made due to the Examiner's misunderstanding of the claimed invention. Applicants submit both the objection to Claim 11 and the rejection of Claim 11 under 35 U.S.C. §112, second paragraph, has been overcome by the present amendment.

Briefly recapitulating, amended Claim 1 is directed to an exposure apparatus that exposes a substrate via a mask with an energy beam in a state where said mask and said substrate are substantially stationary. The exposure apparatus comprises an exposure system which includes a projection optical system having an image field large enough so that a divided area on the substrate exposed in one time with a scanning exposure apparatus can be exposed in one shot by projecting the energy beam outgoing from the mask onto the substrate. The exposure apparatus also includes a substrate stage on which said substrate is mounted. The invention of Claim 1 permits improved accuracy of exposures.<sup>2</sup>

Nishi discloses a scanning exposure apparatus for transferring a pattern on a mask onto a photosensitized substrate.<sup>3</sup> However, Nishi does not disclose or suggest “[a]n exposure apparatus that exposes a substrate via a mask with an energy beam in a state where said mask and said substrate are substantially stationary” as recited in Applicants’ amended Claim 1. In Nishi, the wafer and reticle are synchronously moved in opposite directions during exposure, whereas in the claimed invention, the reticle and wafer are stationary according to a step-and-repeat method described in Applicants’ originally filed specification.

Further, contrary to the Official Action, Nishi does not disclose or suggest a projection optical system having an image field large enough so that a divided area on a

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<sup>1</sup> Specification, page 1, lines 23-24; page 25, lines 9-11; and page 77, lines 19-25.

<sup>2</sup> Specification, page 12, lines 2-16.

<sup>3</sup> Nishi, abstract, column 23, lines 49-67.

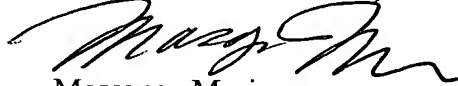
substrate exposed in one time with a scanning exposure apparatus can be exposed in one shot. In Nishi, the divided area on a substrate is exposed in piecemeal fashion as the reticle and wafer move in opposite directions. Thus, Nishi does not disclose or suggest all the features recited in Applicants' amended Claim 1. Applicants have also considered the cited Muraki and Ota references and submit that these references do not cure the deficiencies of Nishi.

Because none of the cited prior art, individually or in combination, disclose or suggest all the elements of independent Claim 1, Applicants submit the inventions defined by Claim 1, and all claims depending therefrom, are not anticipated and are not rendered obvious by the asserted prior art for at least the reasons stated above.<sup>4</sup> For similar reasons, Applicants submit the inventions defined by Claims 8, 13, 14, 21, 27, 28, 41, and 46, and all claims depending therefrom, also are not anticipated and are not rendered obvious by the asserted prior art

Accordingly, examination on the merits of Claims 1-57 is believed to be in order, and an early and favorable action on the merits is respectfully requested.

Respectfully submitted,

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<sup>4</sup> MPEP § 2142 "...the prior art reference (or references when combined) must teach or suggest **all** the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."